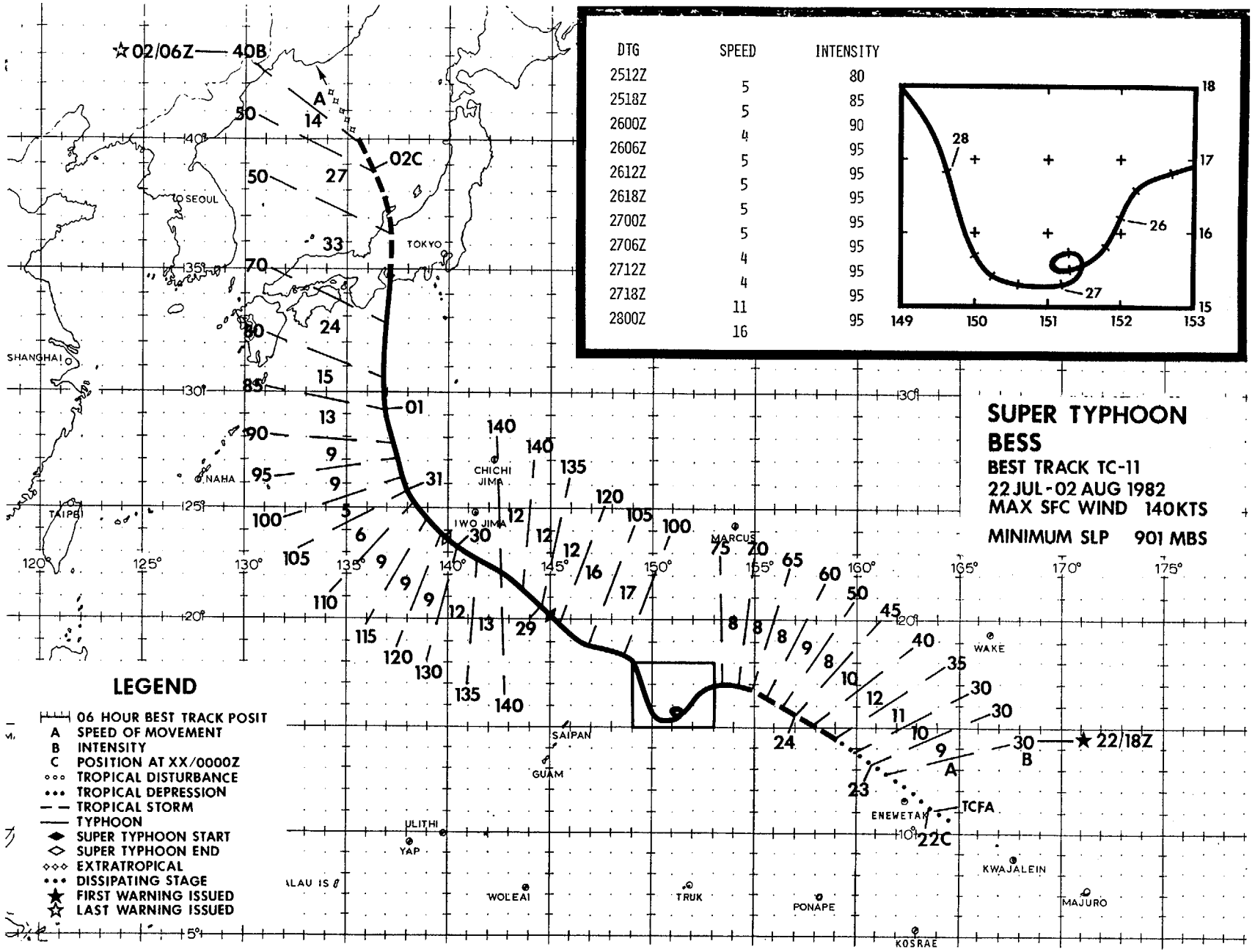

DTG	SPEED	INTENSITY
2512Z		80
2518Z	5	85
2600Z	5	90
2606Z	4	95
2612Z	5	95
2618Z	5	95
2700Z	5	95
2706Z	5	95
2712Z	4	95
2718Z	4	95
2800Z	11	95
	16	

SUPER TYPHOON BESS

BEST TRACK TC-11

22 JUL - 02 AUG 1982

MAX SFC WIND 140 KTS

MINIMUM SLP 901 MBS

Bess formed at the eastern end of a maximum cloud zone associated with the monsoon trough anchored south of Guam. By 21 July, this area of cloudiness had separated into three masses near 132E, 148E, and 168E. The two easternmost cloud masses continued to develop and became Typhoon Andy (10) and Super Typhoon Bess. The third area dissipated over the Philippine Islands.

A Tropical Cyclone Formation Alert was issued for an area near 11N 165E at 211900Z. Observations from Kwajalein (WMO 91336) and Ailinglaplap (WMO 91367) showed that sea level pressures had continued to fall in the region, and satellite imagery indicated increased convection and organization in the cloud system.

The first warning, with maximum winds of 30 kt (15 m/sec), was issued at 221800Z when the curvature of loosely organized cloud bands into the central cloud mass increased. Initial forecasts for Bess indicated a track toward the northwest, in response to an east-southeasterly flow at low- and mid-levels. Reconnaissance aircraft missions during the period 222200Z to 232200Z indicated that the surface and 700 mb centers were not well-aligned vertically. Once this feature was eliminated, Bess began to intensify and by 241800Z, it was upgraded to typhoon strength based upon satellite imagery which indicated a 30 nm (56 km) eye had developed.

Bess maintained its northwestward track for the first 48 hours in warning status. However, by 241800Z a noticeable decrease in the speed of movement was observed as Bess began to move toward the west-northwest. This change in motion was thought to be the result of westward building of the subtropical ridge to the north. Consequently, the forecast track was changed to a more westward heading. Contrary to JTWC expectations, Bess took a turn toward the southwest at 251200Z. Subsequent analysis of satellite imagery indicates that a short wave trough had just passed to the north of the circulation. The enhanced northwesterly flow behind this trough forced Bess toward the southwest. During this period, Bess slowed to 5 kt (9 km/hr) and completed a 20 nm (37 km) diameter cyclonic loop, while its intensity remained at 95 kt (49 m/sec). Further intensification did not occur and Bess remained on its southwestward track until another short wave trough moved eastward from Japan on 27 July. In response to this trough, Bess took a noticeable turn north-northwestward until 280600Z when Bess began moving toward the northwest along the southwestern extension of the subtropical ridge. While moving northwestward, a rapid intensification period began, culminating in the attainment of super typhoon strength and a peak intensity of 140 kt (72 m/sec) at 290600Z.

As Bess approached 25N, a decrease in forward movement was observed; numerical forecast fields and the JTWC 500 mb analysis of 30 June indicated a weakness forming in the subtropical ridge over the southern islands of Japan which would allow Bess to take a more northward track. As Bess entered the south-southeasterly flow associated with the western periphery of the subtropical ridge, interaction with the mid-latitude westerlies was expected to occur within 36 hours and Bess was forecast to recurve along the southern coast of Japan. Bess, however, maintained a northward track. The Typhoon Acceleration Prediction Technique TAPT (Weir, 1982) was employed, and correctly forecast significant acceleration commencing near 28N. From this latitude, Bess did begin to accelerate toward the north and eventually merged with a low pressure center in the Sea of Japan on 02 August.

Bess passed over the Araumi Peninsula on central Honshu where extensive damage and human suffering were reported. The greatest damage was caused by torrential rainfall which set off 1,557 landslides and flooded over 27,000 homes, leaving 25,000 persons homeless, and 59 dead. More than 25 ships ran aground or were lost, over 100 bridges were washed out, and nearly 300 acres (741 hectares) of farmland were flooded.

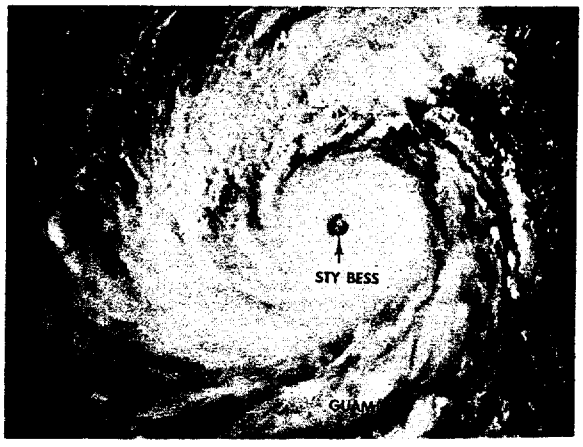

Figure 3-11-1. Super Typhoon Bess at maximum intensity. 290430Z August (NOAA 7 visual imagery).